David Sisneros

FY 1999 - FY 2001

Aquatic weeds, algae, and other organisms in Reclamation water systems produce large quantities of biomass which obstruct water flows, prevent access for maintenance and recreation, cause structural damage, and otherwise negatively affect system operations, water quality, and wildlife habitat. The purpose of this research was to implement integrated pest management techniques utilizing incorporating chemical, mechanical, and biological elements, with the goals of improved operational efficiency and reduced adverse environmental impacts.

This particular research focused on investigating alternative chemical application methods which could be effectively used to control aquatic weeds, algae, and other organisms in Reclamation water. In addition, the research is geared to investigate reduced applications (below label rates) of new and older registered aquatic herbicides for improved efficacy.

An automated chemical metering system (ACMS) has been under development since 1994 as a result of field need for maintaining a constant target concentration of aquatic herbicide during fluctuating flow conditions. The ACMS has, in four field trials, been able to maintain specific low rates of herbicide concentration in systems that have had significant change in flow over a period of 84 to120 hours. In 1999, Reclamation was involved in five aquatic herbicide applications using the ACMS to control algae in the Closed Basin Project. In addition, Reclamation assisted the Oklahoma-Texas Area Office in preliminary planning and sampling protocol for possible chemical control technology for controlling aquatic site pests in irrigation districts in the Lower Rio Grande Valley, Texas. Currently, Reclamation is endeavoring to market the ACMS technology domestically. Additional marketing is ongoing to determine the general need for this technology in applications other than for aquatic site pests.

Applied Biochemist
Army Corps of Engineers
Bureau of Reclamation - Closed Basin Project
Bureau of Reclamation - Office of Policy
Bureau of Reclamation - Oklahoma - Texas Area Office
Elf Atochem
Farmers Independent Ditch Company (Greeley, Colorado)
North Side Canal Company (Jerome, Idaho)
Salt River Project (Phoenix, Arizona)

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